

## WHAT IS CLAIMED IS:

## 1. An electrical insulator comprising:

a dielectric rod (1) including at least one slot (10);

5 an optical fiber cable (2) situated in the slot (10);

a dielectric material (8) filling the slot (10) and holding the cable (2) without stress in the slot (10); and

10 a dielectric covering (3) surrounding the rod (1) and presenting outwardly-directed projections (30) in the form of skirts;

the electrical insulator being characterized in that the cable (2) is flexible; and

15 in that all of the space situated between the rod (1) and the cable (2) is filled with said dielectric filler and holding material (8).

2. An electrical insulator according to claim 1, characterized in that the slot (10) is deeper than it is wide;

in that the cable (2) is situated closer to the bottom (12) of the slot (10) than to the opening (11) of the slot (10); and

25 in that the covering (3) is a single piece secured to the rod (1) and directly in contact with the rod (1).

3. An electrical insulator according to claim 2, characterized in that the depth (p) of the slot (10) lies  
30 in the range 15 mm to 25 mm.

4. An electrical insulator according to claim 1, characterized in that the covering (3) comprises a plurality of skirts (30) stacked one on another.

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5. An electrical insulator according to claim 4, characterized in that the electrical insulator also

includes an intermediate tube (34) situated between the rod (1) and the covering (3).

6. An electrical insulator according to claim 5,  
5 characterized in that the intermediate tube (34) and the covering (3) are made of the same material.

7. An electrical insulator according to claim 1,  
characterized in that the rod (1) includes a plurality of  
10 slots (10) regularly spaced apart around its periphery.

8. An electrical insulator according to claim 1,  
characterized in that the rod (1) is made of fiberglass.

15 9. An electrical insulator according to claim 1 or claim 2, characterized in that the filler and holding material (8) is a silicone paste that withstands high temperatures.

20 10. An electrical insulator according to claim 1, characterized in that the optical fiber cable (2) is a telecommunications cable.

11. An electrical insulator according to claim 1 or claim  
25 2, characterized in that the diameter ( $\underline{d}$ ) of the optical fiber cable (2) lies in the range 5 mm to 10 mm.

12. An electrical insulator according to claim 1,  
characterized in that the optical fiber cable (2)  
30 comprises a central reinforcing element (21) having tubes (22) disposed thereabout, said tubes (22) containing said optical fibers (23), and themselves being surrounded by an outer sheath (26).

35 13. An electrically insulating transition comprising an electrical insulator according to claim 1 or claim 2, the electrically insulating transition being characterized in

that it comprises at least two parts that are releasably connected together, namely the electrical insulator and a box (51) situated at one end (5) of the electrical insulator.

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14. An electrically insulating transition according to claim 13, characterized in that the box (51) contains a cassette (4) for storing optical fiber splices.

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15. A system comprising at least one optical phase conductor (7) connected to an electrically insulating transition comprising an electrical insulator according to claim 1 or to an electrically insulating transition according to claim 13.